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2
3 BILL NO. S-76-03-39.

4 SPECIAL ORDINANCE NO. S- 80-76

5 AN ORDINANCE approving a contract
6 with ENERGY ABSORPTION SYSTEMS,
7 INC. for materials for the Street
Lighting Department.

8 BE IT ORDAINED BY THE COMMON COUNCIL OF THE CITY
9 OF FORT WAYNE, INDIANA:

10 SECTION 1. That the contract dated March 3,
11 1976, between the City of Fort Wayne, by and through its
12 Mayor and the Board of Public Works and Energy Absorption
13 Systems, Inc., for:

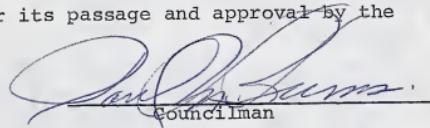
14 12 - Type A #206-5000 Yellow Hydro \$21,987.00
15 Cell Units -

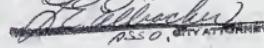
16 12 - Type B #400-5000 Yellow Hydro \$48,450.60
17 Cell Units - \$70,437.60

18 9% Freight 6,339.38
19 Total \$76,776.98

20 all as more particularly set forth on City Utilities Purchase
21 Order No. 7714, which is on file in the Office of the
22 Department of Purchasing and is by reference incorporated
23 herein, made a part hereof and is hereby in all things
24 ratified, confirmed and approved.

25 SECTION 2. This Ordinance shall be in full force
26 and effect from and after its passage and approval by the
27 Mayor.


Dan W. Burns
Councilman

33 APPROVED AS TO FORM
34 AND LEGALITY,
35 
P. E. Wachter
ASSO. CITY ATTORNEY

Read the first time in full and on motion by Burns, seconded by Hinga, and duly adopted. read the second time by title and referred to the Committee on City Utilities (and the City Plan Commission for recommendation) and Public Hearing to be held after due legal notice, at the Council Chambers, City-County Building, Fort Wayne, Indiana, on _____, the _____ day of _____, 197____, at _____ o'clock P.M., E.S.T.

Date: 3-23-76.

Charles W. Wetterman
CITY CLERK

Read the third time in full and on motion by Burns, seconded by Hinga, and duly adopted, placed on its passage. Passed (LOST) by the following vote:

| | AYES | NAYS | ABSTAINED | ABSENT | TO-HIT |
|--------------------|----------|----------|-----------|----------|--------|
| <u>TOTAL VOTES</u> | <u>8</u> | <u>0</u> | | <u>1</u> | |
| <u>BURNS</u> | <u>✓</u> | | | | |
| <u>HINGA</u> | <u>✓</u> | | | | |
| <u>HUNTER</u> | <u>✓</u> | | | | |
| <u>MOSES</u> | <u>✓</u> | | | | |
| <u>NUCKOLS</u> | | | | | |
| <u>SCHMIDT, D.</u> | <u>✓</u> | | | | |
| <u>SCHMIDT, V.</u> | <u>✓</u> | | | | |
| <u>STIER</u> | <u>✓</u> | | | | |
| <u>TALARICO</u> | <u>✓</u> | | | | |

DATE: 4-13-76

Charles W. Wetterman
CITY CLERK

Passed and adopted by the Common Council of the City of Fort Wayne, Indiana, as (Zoning Map) (General) (Annexation) (Special) (Appropriation) Ordinance (Resolution) 180-76 on the 18th day of April, 1976.

TEST: (SEAL)

James Stier
PRESIDING OFFICER

Presented by me to the Mayor of the City of Fort Wayne, Indiana on the 14th day of April, 1976, at the hour of 11:00 o'clock A.M., E.S.T.

Charles W. Wetterman
CITY CLERK

Approved and signed by me this 14th day of April, 1976, at the hour of 5:15 o'clock P.M., E.S.T.

Robert E. Armstrong
MAYOR

Held
Bill No. S-76-03-39

REPORT OF THE COMMITTEE ON CITY UTILITIES

We, your Committee on City Utilities to whom was referred an Ordinance
approving a contract with ENERGY ABSORPTION SYSTEMS, INC. for materials
for the Street Lighting Department

[12 blank lines]

have had said Ordinance under consideration and beg leave to report back to the Common
Council that said Ordinance ed PASS.

Paul M. Burns - Chairman

John Nuckols - Vice-Chairman

William T. Hinga

Fredrick R. Hunter

Samuel J. Talarico

4/13-76
DATE CONCURRED IN
CHARLES W. WESTERMAN, CITY CLERK

**CITY OF FORT WAYNE
CITY UTILITIES**

DEPARTMENT OF PURCHASES
ROOM 950 CITY-COUNTY BUILDING
NUMBER ONE EAST MAIN STREET
FORT WAYNE, INDIANA 46802

63-679 3/18/76

ORIGINAL
PURCHASE ORDER NO. 7141

This number must appear on each pack-
age, packing slip, invoice, bill of lading,
express receipt and correspondence.

DATE March 3, 1976

J. J. Essex
Midwest Area Mgr.
Energy Absorption Systems, Inc.
One I.B.C. Plaza
Chicago, Illinois 60611

SHIP TO —

Street Lighting
MICHIGAN AVENUE
1711 South Lafayette St.
City

**MAIL ALL INVOICES TO —
CITY UTILITIES**

**GENERAL ACCOUNTING
4th FLOOR CITY-COUNTY BUILDING
NUMBER ONE EAST MAIN STREET
FORT WAYNE, INDIANA 46802**

**INVOICE IN DUPLICATE, INCLUDING
CERTIFICATION AS REQUIRED BY
INDIANA STATE BOARD OF ACCOUNTS**

| QUANTITY RECEIVED | QUANTITY ORDERED | DESCRIPTION | ACCT. OR W.O. NO. | UNIT PRICE | TOTAL |
|--|------------------|--|-------------------|------------|-----------|
| 12 | | Type A #200-5000 Yellow Hydro Cell Units | 31 | 332.25 | 21,987.00 |
| 12 | | Type B #400-5000 Yellow Hydro Cell Units | 34 | 37.55 | 48,450.60 |
| | | NOTE: Above cell units to include Yellow Safety belt wrap. Also, above units to be as per attached specifications. | | | 70,437.60 |
| | | 9% Freight | | | 6,339.38 |
| | | Total | | | 76,776.98 |
| SUBJECT TO COUNCILMANIC APPROVAL | | | | | |
| <p><i>H. J. H.</i></p> <p>For: Impact Attenuator Installation Per price Quots of J. J. Essex 4/11/76 dated 4/10/76 (attached)</p> <p><i>E. C. H. Scott</i> <i>May 9 Scott</i> R.W./MS (115-76)</p> | | | | | |
| <p>ATTENTION! Send all Invoices to General Accounting 4th Floor, City-County Bldg. 1 E. Main St. Fort Wayne, Indiana 46802 Show P. O. Number on Packing Slip and Invoice.</p> | | | | | |

NOTE TERMS OF PAYMENT MUST BE SHOWN ON FACE OF INVOICE. OTHERWISE A 2% CASH DISCOUNT WILL BE TAKEN

SPECIFICATIONS

HI-DRO CUSHION CELL CLUSTER

General Description- All cell cluster units used for street and highway applications shall be manufactured by Energy Absorption Systems, Inc. of Chicago, Illinois, and shall consist of materials manufactured to their specifications.

Materials- All cell cluster units shown on the engineering drawings submitted by the manufacturer shall be manufactured and assembled in accordance with the manufacturer's standards and requirements from:

A. Cells

1. Solid Vinyl Cells. Solid vinyl cells shall be used in the nose portion of the cell sandwich units and in the assembly of hi-dro cusion cell clusters.

The cells shall be hollow vinyl plastic cylinders with 1/4 inch thick walls and a nominal outside diameter of 6 inches. The cells shall be 39 inches long unless otherwise indicated on the plans. An insert containing sharp-edged orifices to regulate the release of water shall be permanently glued into the open end of cells used in solid-cell cushion units. In the nose of the hi-dro cushion cell sandwich units flexible cell cartridges as described below in A-2 shall be used.

The material used in the manufacture of the cells shall be high quality vinyl plastic specially formulated from high molecular weight homopolymer vinyl resins combined with totally primary plasticizing systems. The plasticizers shall be chosen so as to produce a vinyl possessing high strengths and remaining flexible in both high and low temperatures. Ultra-violet stabilizers, heat stabilizers anti-bacteriological agents and other additives shall be utilized to give maximum protection and long life in outdoor environments.

2. Flexible Cell Cartridges- Flexible cell cartridges shall be used in the cell sandwich portions of a hi-dro cusion cell sandwich. The flexible cell cartridges shall have an outside diameter of approximately 5 1/2 inches. They shall be provided in standard lengths of 24, 30, and 36 inches.

The material used in the manufacture of the cartridges shall be a vinyl coated nylon fabric Shelterlite, Style 3022 or equal. The base fabric shall consist of 6.1 ounces of nylon and 16 ounces of vinyl to produce a total weight of 22 ounces per sq.yd. It shall remain flexible and water tight in extremes of heat and cold. Hydrostatic resistance shall be 300 psi or better.

An insert containing sharp-edged orifices to regulate the release of water shall be permanently glued into the open end.

B.

Fasteners

The cells shall be fastened into clusters with special self-drilling heated, sheet-metal screws (No.14, Hexagonal Head) and speed nut-washer combination units that are cadmium plated or hot-dip galvanized. The fasteners currently in use are rated to withstand a torque of 142 inch-pounds. The cells shall be joined at top and bottom of each cell. Files shall be joined in two or more locations as specified by the design. Attachments to the structural backing system can be accomplished with straps and/or fasteners specified above-or as shown on the drawings or as recommended by the Manufacturer.

C.

Orifice Inserts and Evaporation-Control Caps

The insert cap combination units are made of the same quality vinyl plastics as specified above for the cells. The orifice sizes will be determined from the design requirements established by the client, i.e., speed limit, weight of vehicle, deceleration rate, etc., and will be placed in the inserts at the assembly plant. The orifice insert is permanently bonded to the cell with a special vinyl adhesive. The adhesive shall be applied in accordance with the Manufacturer's recommendations.

D.

Miscellaneous Metal Work

All metal shall be ASTM A36 or M1020 unless otherwise specified and it shall be hot-dip galvanized and/or painted to protect against corrosion.

E.

Wire Rope

The two 7/8 inch wire ropes shall be preformed galvanized 6 x 19 wire ropes with independent wire cores. If other wire rope is used it shall be equal in strength and in resistance to elongation under load.

The four pullout wire ropes shall be furnished by the Manufacturer and shall be 3/8 inch galvanized, flexible 7 x 12 wire ropes, or approved equal.

F.

Safety Flex Belt

Cell clusters and nose sections of cell sandwich units shall have a safety flex belt wrapped around the cells. The belt generally is 30 inches high.

The belt shall be made of polypropylene cloth and resins combined together so as to distribute loads vertically yet permit deflections readily in a longitudinal or transverse direction. This belt shall be yellow.

F. The belt shall be fastened to the backup or to other sections of belt or to fender panels with 1/2 inch diameter carriage bolts.

G. Diaphragms, Fender Panels, and Interior Panels

1. Diaphragms and fender panels shall be designed and furnished by the Manufacturer. They shall possess the necessary strength required for proper operation of the unit.
 - a. Diaphragms shall generally be 1 1/2 inches thick and coated on both sides with fiberglass. Other thicknesses may be used in special situations at the Manufacturer's discretion.
 - b. Fender panels may vary in thickness from 3/4 inch up to 1 1/4 inch and shall be encased entirely in fiberglass. The exterior surface shall have a low coefficient of friction and penetration resistant surface.
2. The interior panels shall be constructed from overlaid plywood. The edges shall be sealed and painted to further enhance their weathering capabilities. They shall be painted with a good quality paint.

H. Color

The hi-dro cushion cells shall be painted yellow.

The hi-dro cusion cell sandwich units shall be painted by the Manufacturer.

Structural Backing Systems

The Hi-Dro Cell Unit Type A. shall be attached to the concrete pier by the use of steel mounting straps as shown on the drawings. These straps shall be supplied with each unit.

The Hi-Dro Cell Unit Type B shall be supported by a specially designed, diagonally braced structural steel backing plate. This assembly as shown on the drawings shall be supplied with each unit of this type.

Engineering drawings shall be prepared by the Manufacturer and submitted to the engineer for approval. All designs and drawings shall be based on design criteria specified by the engineer and the Manufacturer warrants the design as being in accordance with the design criteria specified. Shop drawings shall be submitted. All drawings shall be submitted at no cost to the engineer, and shall be based on site data information made available to the Manufacturer by the engineer.

The Manufacturer shall warrant materials and workmanship for a period of one year from date of manufacture.

Field Installation- Installation of the hi-dro cushion cell units shall be accomplished by experienced workmen in accordance with the recommendations of Energy Absorption Systems, Inc. The site preparation work to be done shall be completed and suitable to fit the unit as detailed on the drawings. Standard anchors, clips, or straps to mount the unit shall be provided by Energy Absorption Systems, Inc.

When installing unit to a concrete backup the steel mounting straps will normally be shipped attached to the unit. Unit should then be positioned and the straps slipped over the concrete anchor bolts. Nuts are attached and tightened and the unit is ready to be filled with water and anti-freeze solution.

At sites using a steel backup, the backup is positioned and installed according to plans. The unit is then put in place. Note that the cap-inserts in the last row of cells are not glued in. The reason for this is to allow access to the bolts mounting the unit to the backup. After tightening these bolts use the adhesive around the inside of the tops of each cell in the last row. Push the cap-insert down into the top of each cell. The unit can then be filled with the water and anti-freeze solution.

The anti-freeze solution used shall be calcium chloride and water. It shall be mixed in the amounts recommended by the manufacturer to prevent freezing up to thirty degrees (F.) below zero. The cost of the solution shall be included in the cost of the impact attenuator unit.



City Clerk Memorandum

CHARLES W. WESTERMAN, Clerk

To Alan C. Lord - Director of Purchasing Date 4-9-76
From Charles W. Westerman - City Clerk
Subject Appearance before Common Council - April 13, 1976

COPIES TO:

RE: BILL NO. S-76-03-39

AN ORDINANCE approving a contract with ENERGY
ABSORPTION SYSTEMS, INC., for materials for
the Street Lighting Department.

Your presence is respectfully requested by Common Council on
April 13, 1976, at 7:00 o'clock P.M., Room 128. Specifically,
Council has requested further information on the above bill.

8-76-03-39

TITLE OF ORDINANCE Special Ordinance - City Utilities Purchase Order 7714

DEPARTMENT REQUESTING ORDINANCE Board of Public Works

SYNOPSIS OF ORDINANCE Provides for purchase of twenty-four (24) Hydro Cell Units to be purchased from Energy Absorption Systems, Inc. at a cost of \$76,776.98 to be used in connection with installation of Impact Attenuators on various railroad elevations.
Pursuant to an Agreement with the State providing for 90% Federal Funding on cost of installation of clusters of tubes filled with water, etc. at railroad elevation columns to protect vehicles from impact, the City Traffic Engineering Department chooses to make the installations. Materials are being ordered through the Street Lighting Department and the Utility will be reimbursed.

REASON FOR ORDERING THROUGH UTILITY:

The Agreement provides the project be done by force account by City. The law prohibits Civil City from doing more than \$30,000 work by force account but a Public Utility is not limited.

(SEE ATTACHED SPECIFICATIONS)

EFFECT OF PASSAGE Provide safety feature at railroad elevation columns

EFFECT OF NON-PASSAGE City's inability to take advantage of 90% funded project

MONEY INVOLVED (Direct Costs, Expenditures, Savings) Cost to Utility of \$76,776.98 to be reimbursed by Civil City from Federal Funds

ASSIGNED TO COMMITTEE *City Utilities M.*